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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,766	06/18/2001	Thanh T. Tran	1981-00800 JMH	2440
23505	7590	08/11/2005	EXAMINER	
CONLEY ROSE, P.C. P. O. BOX 3267 HOUSTON, TX 77253-3267			SHANG, ANNAN Q	
			ART UNIT	PAPER NUMBER
			2617	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/883,766	Applicant(s) TRAN, THANH T.	
	Examiner Annan Q. Shang	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/18/01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7, 13-21 and 27-33 are rejected under 35 U.S.C. 102(e) as being anticipated by **Schuster et al (6,175,871)**.

As to claim 1-3, note **Schuster** reference figure 2, discloses method and apparatus for real time communication over packet networks and further discloses a video distribution network, comprising:

a video server (Sender 20/65, figs. 1, 2 and col. 4, line 65-col. 5, line 9), which streams real time media, such as video, multimedia, streaming applications, etc., to

a video client (Receiving Device 'RD' 45/75) operatively coupled to the server and receives video packets from the server (col. 4, line 65-col. 5, line 9 and col. 7, lines 13-40), the video client (RD 45/75) including a video buffer (Buffer 'B' 140) in which the video packets received from the server are stored and whose capacity can be dynamically adjusted, i.e., increased/decreased (col. 7, lines 24-40, col. 9, line 38-col. 10, line 11 and line 21+), note that B-140 has a variable buffer length (col. 10, lines 32-

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35) which dynamically adjusts the buffer length based on transporting characteristics of the network 35 and plays out at the frame rate used by the encoder 80 of the server or sender (col. 10, lines 45-52).

As to claim 4, Schuster further discloses where RD 45/75 includes memory (Real Decoder 130) and Video buffer (B-140) comprises a portion of the memory for storing the received frames (col. 9, lines 34-47).

As to claim 5-6, Schuster further discloses where the capacity of the video buffer can be dynamically increased by allocating more for use by the video buffer and can be dynamically decreased by de-allocating a portion of the video buffer (col. 10, lines 12-44)

As to claim 7, Schuster further discloses where the server and the client are operatively coupled together via wireless transmission link (col. 6, lines 62-67).

As to claims 13-14, Schuster further discloses sending a test packet (col. 6, lines 7-10, col. 7, lines 41-46 and col. 7, line 54-col. 8, line 8 and lines 45-50) across the network from the client (Receiving Device 'RD' 45/75) to the server (Sender 20/65, figs. 1, 2 and col. 4, line 65-col. 5, line 9); receiving the test packet from the server back to the client; measuring the amount of time (the delay, col. 6, lines 7-10 and col. 9, lines 1-27) the test packet took to travel from the client to the server and back to the client, note that B-140 is a variable length buffer which dynamically adjusts the buffer length based on the characteristics of transporting network.

As to claim 15-17, note **Schuster** reference figure 2, discloses method and apparatus for real time communication over packet networks and further discloses a client (Receiving Device 'RD' 45/75), which receives multimedia data, comprising:

a processor (Computation Decoder(s) 150, fig. 2, col. 7, lines 47-53 and col. 11, lines 1-38); and

communication unit (inherent to RD 45/75) to the processor and the system memory (Real Decoder 130) the communication unit receives the multimedia data; where the processor allocates a portion of the system memory as a buffer (Buffer 140) to receive the multimedia data, the buffer having a capacity that can be changed, i.e., increase/decrease, while the client receives the multimedia data (col. 7, lines 24-40, col. 9, line 28-col. 10, line 11 and line 21+), note that B-140 has a variable buffer length (col. 10, lines 32-35) and dynamically adjusts the buffer length based on transporting characteristics of the network 35 and plays out at the frame rate used by the encoder 80 of the server or sender (col. 10, lines 45-52).

Claim 18 is met as previously discussed with respect to claim 4.

Claims 19-20 are met as previously discussed with respect to claims 5-6.

Claim 21 are met as previously discussed with respect to claim 7.

Claims 27-28 are met as previously discussed with respect to claims 13-14.

As to claim 29, note **Schuster** reference figure 2, discloses method and apparatus for real time communication over packet networks and further discloses a method for streaming video from a server to a client across a network, comprising:

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Sending a test packet (col. 6, lines 7-10, col. 7, lines 41-46 and col. 7, line 54-col. 8, line 8 and lines 45-50) across the network from the client (Receiving Device 'RD' 45/75) to the server (Sender 20/65, figs. 1, 2 and col. 4, line 65-col. 5, line 9); receiving the test packet from the server back to the client; measuring the amount of time (the delay, col. 6, lines 7-10 and col. 9, lines 1-27) the test packet took to travel from the client to the server and back to the client;

allocating a portion of memory (Real Decoder 130) to a video buffer (Buffer 140) based on the time measure (col. 6, lines 7-10 and col. 9, lines 1-20); receiving video packets from the server and storing the video packets in the video buffer (Buffer 140, (col. 7, lines 24-40, col. 9, line 28-col. 10, line 11 and line 21+), note that B-140 has a variable buffer length (col. 10, lines 32-35) and dynamically adjusts the buffer length based on transporting characteristics of the network 35 and plays out at the frame rate used by the encoder 80 of the server or sender (col. 10, lines 45-52).

As to claim 30, Schuster further discloses retrieving the video packets from the video buffer and playing the packets on a monitor (col. 9, line 65-col. 10, line 11).

Claims 31-33 are met as previously discussed with respect to claims 5-6.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8-12 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schuster et al (6,175,871)** as applied to claims 1 and 15 above, and further in view of **Tanaka et al (6,470,376)**.

As to claim 8-12, Schuster further teaches where the client monitors transporting characteristics or various predetermined thresholds of the transporting characteristics and dynamically adjusting the variable length buffer accordingly based on the transporting characteristics and plays out at the frame rate used by the encoder 80 of the server or sender (col. 10, lines 12-56 and col. 11, lines 1-64), but fails to explicitly teach monitoring amount of unplayed video packets in the video buffer (B-140) with various predetermined thresholds within predetermined periods of seconds, minutes, etc.,

However, note **Tanaka** reference figures 1-3, discloses a decoding unit, which includes and I/O processor 113, with a monitoring program, which monitors the peripheral devices, such as, local Memory, Buffer Memory, etc., and based on the received information, and various predetermined threshold levels, controls the storing and buffering of the received data (col. 9, lines 39-56, col. 13, lines 17-32, lines 47-64 and col. 20, lines 13-61).

Therefore it would have obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Tanaka into the system of Schuster to monitor unplayed video stored in the video buffer using various predetermined thresholds to dynamically adjust the buffer to provide granularity to the system

Claims 22-26 are met as previously discussed with respect to claims 8-12.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Aiken et al (6,625,709) disclose fair share dynamic resource allocation scheme with a safety buffer.

Susnow (6,594,329) discloses elastic buffer.

Cohen et al (6,230,220) method for allocating either private or shared buffer memory for storing data from sort operations in accordance with an assigned value or threshold value.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355**. The examiner can normally be reached on **700am-400pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Christopher S. Kelley** can be reached on **571-272-7331**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC)** at 866-217-9197 (toll-free).



Annan Q. Shang



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